

January 6, 2010

Mr. Wayne Jones Haldor Topsoe, Inc. 17629 El Camino Real Suite 300 Houston, Texas 77058

Minnkota Power Cooperative Milton R. Young Station Units 1 & 2 Investigation of Hypothetical Application of TESCR and LDSCR BMcD Project 31777

Dear Mr. Jones:

Burns & McDonnell has prepared supplemental reports for the NOx BACT analyses for Milton R. Young Station (MRYS) Units 1 and 2, and these reports have been submitted by Minnkota Power Cooperative to the North Dakota Department of Health. In the text of these reports, we stated that:

During preparation of the cost estimate, Burns & McDonnell consulted with two SCR catalyst vendors experienced with biomass-fired boiler SCRs and European coal-fired boilers with low-dust and tail end SCR systems. However, neither of these vendors was willing to guarantee a catalyst replacement schedule for cyclone boilers firing North Dakota lignite without results following successful extensive pilot-scale slipstream testing that confirm the deactivation and fouling rates. According to these catalyst suppliers, there is no SCR operating experience in the world found to be directly comparable to the hypothetically applied tail end and low-dust SCR cases on North Dakota lignite-fired cyclone boilers being evaluated. Thus they were unable to offer a guaranteed catalyst replacement schedule based on their experience.

Please review this statement and respond in writing to confirm that we have correctly stated your company's position on catalyst life guarantees for the application of SCR systems to MRYS Units 1 & 2 without successful completion of pilot testing.

Sincerely,

Robert D Blakley, P.E.

Project Engineer



January 6, 2010

Mr. Noel Rosha CERAM Environmental, Inc. 7304 W. 130th St. Suite 140 Overland Park, Kansas 66213

Minnkota Power Cooperative Milton R. Young Station Units 1 & 2 Investigation of Hypothetical Application of TESCR and LDSCR BMcD Project 31777

Dear Mr. Rosha:

Burns & McDonnell has prepared supplemental reports for the NOx BACT analyses for Milton R. Young Station (MRYS) Units 1 and 2, and these reports have been submitted by Minnkota Power Cooperative to the North Dakota Department of Health. In the text of these reports, we stated that:

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Sincerely,

Robert D Blakley, P.E.

Project Engineer

HALDOR TOPSØE

Haldor Topsoe, Inc. 17629 El Camino Real Suite 300 Houston, Texas 77058 www.topsoe.com

Tel: (281) 228-5000 Fax: (281) 228-5019

January 13, 2010

Mr. Robert D. Blakley, P.E. Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114

Minnkota Power Cooperative, Milton R. Young Units 1&2 Investigation of Hypothetical Application of TESCR and LDSCR BMcD project 31777

Mr. Blakley,

This letter is to confirm that it is my understanding, based on the information currently at hand, that Haldor Topsoe, Inc would consider providing a SCR catalyst life guarantee for either Milton R. Young Unit 1 or Unit 2 for either a tail end (TESCR) or low dust (LDSCR) configuration only following the successful completion of a pilot-scale slipstream test of our SCR catalyst on one of the two MRY units. The issuance of a SCR catalyst life guarantee, if any, would be for only the configuration tested during the pilot-scale testing.

If you have any question please feel free to contact me at 281-228-5136

Sincerely,

Wayne S. Jones

Sales Manager, Power Generation SCR/DeNOx Catalyst & Technology

Bachman, Tom A.

From:

John Graves [jgraves@minnkota.com]

Sent:

Thursday, January 14, 2010 11:16 AM

To:

O'Clair, Terry L.

Cc:

Bachman, Tom A.; David B Sogard

Subject:

Catalyst Vendor Guarantees

Attachments:

CERAM Jan 06_2010 (signed).pdf

Terry,

Below is an email from CERAM confirming their position on catalyst guarantees for LDSCRs and TESCRs at Milton R Young Station.

John T. Graves, P.E.

Environmental Manager

Minnkota Power Cooperative, Inc.

P.O. Box 13200

Grand Forks, N.D. 58208-3200

Tel: (701) 795-4221 Fax: (701) 795-4214

---- Forwarded by John Graves/Legal/Minnkota on 01/14/2010 11:11 AM -----

From:

"Blakley, Robert" <rblakley@burnsmcd.com>

To:

John Graves < jgraves@minnkota.com>

Cc:

"Weilert, Carl" < cweiler@burnsmcd.com>

Date:

01/13/2010 04:08 PM

Subject: FW: Investigation of Hypothetical Application of TESCR and LDSCR, Minnkota Power

Cooperative Milton R.

Young Station Units 1 & 2

From: Noel Rosha [mailto:Noel.Rosha@ceram-usa.com]

Sent: Wednesday, January 13, 2010 3:02 PM

To: Blakley, Robert Cc: Weilert, Carl

Subject: RE: Investigation of Hypothetical Application of TESCR and LDSCR, Minnkota Power Cooperative

Milton R. Young Station Units 1 & 2

Robert,

CERAM confirms that the attached letter accurately reflects our position regarding catalyst life guarantees for the Milton R. Young Station tail end and low-dust SCR applications.

Best regards,

Noel Rosha, P.E. Senior Applications Engineer

CERAM Environmental, Inc.

Phone: 913-239-9896 Mobile: 913-638-9672

From: Blakley, Robert [mailto:rblakley@burnsmcd.com]

Sent: Wednesday, January 06, 2010 2:48 PM

To: Noel Rosha Cc: Weilert, Carl

Subject: RE: Investigation of Hypothetical Application of TESCR and LDSCR, Minnkota Power Cooperative

Milton R. Young Station Units 1 & 2

Noel:

Confirming our phone conversation of January 6, 2010.

We are asking for review of our attached letter with written confirmation regarding stating CERAM-USA's catalyst life guarantee being contingent upon successful completion of pilot-scale slipstream testing that confirm catalyst deactivation and fouling rates of the studied hypothetical applications of tail end and low-dust SCRs for Units 1 and 2 at Milton R.

Young Station for Minnkota Power Cooperative.

Robert D. Blakley, P.E.

Associate Project Engineer

(Currently registered and licensed in North Dakota) Burns & McDonnell Energy Group 9400 Ward Parkway

Kansas City, MO 64114 Direct: 816-822-3842 Main: 816-333-9400 Fax: 816-333-3690

rblakley@burnsmcd.com

www.burnsmcd.com

(See attached file: CERAM Jan 06_2010 (signed).pdf)